

RESPONSE AND REQUEST FOR RECONSIDERATION

The text on page 6 which the Examiner objected to as constituting new matter has been deleted in order to facilitate allowance of the application (although Applicants do not concede that the deleted text constitutes new matter).

The subject matter of claim 29 has been introduced into claim 1.

Entry of these amendments is requested at this time since they will either place the application in condition for allowance or will reduce the number of issues for appeal.

While several references had been cited against original claims 1-28, the only rejection that was made against the subject matter originally in claim 29, now entered into claim 1, was under 35 U.S.C. 112. This 112 issue is the only issue standing in the way of allowance of the present claims.

Specifically, the objection was that the subject matter of claim 29 was not sufficiently described in the application as filed, referring presumably to the claimed range of "15 to about 20 percent" of the substituents having a molecular weight of less than 500. Although limits of 10, 15, and 20 percent (each modified by "about" - page 25) are disclosed in the specification as originally filed (page 6), the Examiner was of the opinion that the specification "teaches away" from the range of 15-20%.

Applicants respectfully disagree with this characterization. The specification teaches one range of 0-20%, another range of 0-15%, and yet another range of 0-10%. While the narrower ranges, such as 0-15%, are described as "preferred," the remainder of the range, that is, 15-20%, is in no way disparaged or taught against.

According, a range of 15 to about 20% is properly taught in the specification.

Conclusion.

For the foregoing reasons it is submitted that the present claims are in condition for allowance. The foregoing remarks are believed to be a full and complete response to the outstanding office action. Therefore an early and favorable reconsideration is respectfully requested. If the Examiner believes that only minor issues remain to be resolved, a telephone call to the Undersigned is suggested.

Any required fees or any deficiency or overpayment in fees should be charged or credited to deposit account 12-2275 (The Lubrizol Corporation).

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

The amended paragraph on page 6:

The substituted succinic acylating agents are those which can be characterized by the presence within their structure of two groups or moieties. The first group or moiety is referred to herein, for convenience, as the "substituent group(s)" and is derived from a polyalkene. The polyalkene from which the hydrocarbyl-substituent groups are derived is characterized by a \overline{M}_n (number average molecular weight) value. Since the substituent as a whole is normally a mixture of individual chains of varying lengths, these substituent groups are characterized by having not more than 20 mole percent, preferably not more than 15 mole percent and most preferably not more than 10 mole percent of individual substituent chains with a \overline{M}_n of less than 500. ~~In an alternative embodiment, more than 10 mole percent, and up to 20 mole percent, of the individual substituent chains will have a \overline{M}_n of less than 500, and in another embodiment, 15 to 20 mole percent of the individual substituent chains will have a \overline{M}_n of less than 500.~~ Typically the substituent groups as a whole will have a \overline{M}_n value of 1000 to 10,000, preferably 1300, 1500, or 2000 to 5000. Most preferably the \overline{M}_n is at least 2000. In another highly favored embodiment, the substituent groups will contain not more than 5 mole percent of substituent groups which have a \overline{M}_n of below 300.

Amendments to the claims:

1. (three times amended) A composition suitable for reducing engine sludge and degradation of elastomer seals comprising
a major amount of an oil of lubricating viscosity and
a minor amount of a nitrogen-containing dispersant wherein the nitrogen containing dispersant is a reaction product of

(I) a hydrocarbyl-substituted succinic acylating agent, wherein ~~more than 10~~ 15 to about 20 mole percent of the individual molecules thereof have a hydrocarbyl substituent with a molecular weight of less than 500; wherein the hydrocarbyl substituent is a polymeric species consisting essentially of olefin monomer units of at least 3 carbon atoms; and

(II) at least one polyamine, wherein the polyamine is

- (a) a polyalkylene amine containing at least one H-N< group; or
- (b) a condensate of (i) a polyalkylene amine containing at least one H-N< group with (ii) at least one alcohol containing at least one ether group, amine group, nitro group, or additional alcohol group;

wherein in said polyamine (a) or condensed polyamine (b) no more than about 20 mole percent of the molecules contain 6 or fewer nitrogen atoms.

28. (three times amended) A composition suitable for reducing engine sludge and degradation of elastomer seals comprising

a major amount of an oil of lubricating viscosity and

a minor amount of a nitrogen-containing dispersant wherein the nitrogen containing dispersant is a reaction product of

(I) a hydrocarbyl-substituted succinic acylating agent wherein the hydrocarbyl substituent is prepared from a polymeric species consisting essentially of olefin monomer units of at least 3 carbon atoms and wherein ~~more than 10~~ 15 to about 20 mole percent of the individual molecules of said polymeric species have a molecular weight of less than 500; and

(II) at least one polyamine, wherein the polyamine is

(a) a polyalkylene amine containing at least one H-N< group; or

(b) a condensate of (i) a polyalkylene amine containing at least one H-N< group with (ii) at least one alcohol containing at least one ether group, amine group, nitro group, or additional alcohol group;

wherein in said polyamine (a) or condensed polyamine (b) no more than about 20 mole percent of the molecules contain 6 or fewer nitrogen atoms.